Co-funded by the Erasmus+ Programme of the European Union

1862
RĪGAS TEHNISKĀ UNIVERSITĀTE

Improvement of master-level education in the field of physical sciences in Belarusian universities, Acronym: "Physics"

Management meeting 6th and 7th Workshop 12-13th April 2018
Belarusian State University
Anatolijs Zabašta, RTU

Adoption of the agenda

Agenda	Time	Contributor
April 12th		
Registration	***9.00***	
Welcome by Belarusian State University	10.00	BSU
Adoption of the agenda. Project progress.	10.15	RTU: A. Zabašta
Reports on new developed courses, teaching materials and study programs and its accreditation in the universities.	10.30	RTU, BSU, GrSU, GoSU and BSTU
Reports on testing of the courses, teaching materials and study programs.	10.45	BSU, GrSU, GoSU and BSTU
Testing of new developed and modernised courses in Spring semester. Accreditation of the courses study programs.	11.00	BSU, GrSU, GoSU and BSTU
Coffee break	***11.15***	
Implementation of curriculum, Book on Applied Physics (WP 2), final version.	11.30	KU Leuven
Implementation of curriculum, Book on Applied Informatics (WP 2), final version.	11.45	RTU
Implementation of curriculum, Book on Functional Nanomaterials (WP 2), final version.	12.00	BSU
Implementation of curriculum, Book on Photonics (WP 2), final version.	12.15	BSU
Implementation of curriculum, Book on Guidelines on Master Thesis in Applied Physics (WP 2), final version.	12.30	UCY
Dissemination and Exploitation of results. Dissemination & Exploitation plan (WP5)	12.45	UCY

Lunch	***13.00***	
Application of innovative teaching methods & electronic environments (WP3). Progress.	13.30	KU Leuven
Feedback on partners 3rd report	13.45	RTU, all partners
Results of the equipment purchase	14.15	BSU, BSTU, Grodno SU, Gomel SU representatives
Feedback on students training in UCY in February 2018	14.30	UCY
Feedback on teachers training in RTU in February 2018.	15.00	RTU
Coffee break	***15.15***	
Monitoring and evaluation by external expert	15.45	RTU
Project financial aspects and arrangements for the Final Financial and Technical reports.	16.00	RTU
Other issues	16.45	All participants
Conclusions, next steps.	17.15	RTU and all partners
The end of the 1st day	***18.00***	

Agenda on April 13th

April 13th		
Feedback from the previous day discussions	9.00	All partners
Visit to BSU laboratories and campus	9.30	BSU
Continuing of discussion about curricular (WP2)	10.30	All partners
Issues of common interest. Bilateral meetings.	11.00	All partners
Coffee break	***12.00***	
The end of the day	12.30	

Project progress

Reports on new developed courses, teaching materials and study programs and its accreditation in the universities.

Reports on testing of the courses, teaching materials and study programs

Testing of new developed and modernized courses in *Spring semester*. Accreditation of the courses study programs

WP2:
Book on Applied Physics

Implementation of curriculum, Book on Applied Informatics

Book on Functional Nanomaterials

Book on Photonics

Book on Guidelines on Master Thesis in Applied Physics

Book on Guidelines on Master Thesis in Applied Physics

Dissemination and Exploitation of results (WP5)

Application of innovative teaching methods & electronic environments (WP3)

Management meeting

Feedback on 3rd progress report – arrangements for Final report

- Final Financial report: 01.11.2018
- Final Technical Report: 01.11.2018

Technical report – ES Agency recommendations

- Recommendations and necessary improvements, which are still in progress:
  - A new version of Dissemination plan should be developed. Strategy to engage the labor market and overcome the reluctance towards 4+2 Bologna type degrees – UCY and other partners
  - Demonstrate complementary with the TEMPUS project – please put in your reports (BSU)
  - To explain the role of associated partners - please put in your reports!
  - To demonstrate project outputs at website – more information is allocated
  - Inter-institutional agreements or bilateral agreements signed/to be signed by partner country institutions to promote cooperation in the field of education and/or research, as a result of cooperation in Erasmus+.

Final Report

- **For each of the Partner Countries** included in the consortium:
  a) List 3 main achievements/results of your project at institutional, national and/or regional level;
  b) Explain how the achievements/results are relevant to the policy area (national and /or regional),

- **Please provide** information and quantify the inter-institutional agreements or bilateral agreements signed/to be signed by partner country institutions to promote cooperation in the field of ..

- Describe and justify where and when **equipment ite**ms have been installed and how they have been used in the project and will be used in the future;

7) Links with society

- Explain how the project helped to strengthen the role of higher education institutions in society at large (contributing to the development of lifelong learning, addressing the knowledge triangle, establishing links with the labour market, etc.);
- Describe how these links have been institutionalised, how many agreements with non-academic stakeholders (industry, NGOs, SMEs, etc.) have been signed and how these will be maintained in the future;

1) Involvement of partners and stakeholders

- how partners will continue to cooperate in the future;

Final Report

3) Sustainability / exploitation of results

- Explain the role, commitment and concrete measures taken by the partner country beneficiaries to guarantee the sustainability of the project outcomes/results beyond the project's lifetime (specify the funding sources if known);
- Explain how you have achieved a multiplier effect of the project; how the results have been exploited beyond the immediate target group and transferred to other contexts (for example to the wider education system, local economy and society, other institutions, other regions, etc.);
- What measures have been taken to formalise or institutionalise links with local non-university partners?
- For joint projects: please explain if any measures have been put in place in order to enlarge the implementation of the project results/outcomes beyond consortium participants;

Final Report

1) Previous recommendations/follow up

- Explain how the recommendations given by the Agency (in the assessment of the Technical report, in the feedback from monitoring visits, in monitoring exchanges with the Agency, etc.) have been followed up, addressing each recommendation separately and highlighting steps and measures taken.

В том числе от Белорусского Контактного Пункта (Листопад)

5) Innovation

- If applicable, describe to which extent the project has proved to be ***innovative*** and how do the project's results offer innovative and creative solutions to promote capacity building

Developed/modernized courses tested during the Autumn semester of the 1st testing year

University	Course Title	Updated or totally newly created	Level (Bachelor, Master 5-year course)	Volume ECTS credit points	Preli-minary number of students	The teaching/training methodologies developed/adopted e.g. e-learning/ training modalities, practical placements in enterprises, etc	The link to the university'webpage	Type of control (set-off, exam)	The status of recognition/accreditation (by the university or a country institution)
BSU	Composite nanostructured materials	totally new	1-year/ 2-year masters / 5-year course	2,0	5	Lecture	https://dl.bsu.by/mod/folder/view.php?id=30554	exam	University validation
GrSU	Nanophotonics	Newly created	Bachelor	4,0	9	Lecture Laboratory works E-learning	https://edu.grsu.by/	exam	State accreditation passes at the moment
GoSU	Sol-gel synthesis of functional materials	totally newly created	2-year master	4	10	Lecture, lab	http://gsu.by/physfac	exam	УД 362017-178/уч от 07.06.2017
BSTU	Functional Nanomaterials	newly created	Master	1,0	4	Lecture	https://dl.bsu.by/course/view.php?id=849	Set-off	university

Tenders for the equipment

Feedback on teachers training in RTU in February 2018

Program for the February 5 – 9th

- **1st day**: RTU laboratories, Innovation management: RTU
- **2nd day**: Active use of a digital learning environment: KU Leuven
- **3rd day**: Visit to RTU filial in Cesis campus.
- **4th day**: Testing of new developed courses. Belarusian universities.
- **5th day**: Testing of new developed courses. Belarusian universities. A round table.

Teachers training seminar in Riga

N	University	Position	Name, surname
1	GRSU	Professor, Department of General Physics	Strekal Natallia
2	GRSU	Docent	Vasilyuk Gennady
3	BSTU(БГТУ)		Krotava Volha
4	BSTU(БГТУ)		Uss Alena
5	BSTU(БГТУ)		Liubimau Aliaksandr
6	BSTU(БГТУ)	Docent	Vishnevskij Konstantin
7	BSU (БГУ)	Professor	Fedotov Alexander
8	BSU (БГУ)	Associated-professor	Gorbach Dmitry
9	BSU (БГУ)	Associated-professor	Melnikava Alena
10	GSU	Lecturer, Docent	Samofalov Andrey
11	GSU	Lecturer, Docent	Kupo Aliaksandr
12	РАНИ	Исполнительный директор Республиканской ассоциации наноиндустрии	Trukhanau Aliaksei
13	РАНИ	Заместитель директора НИИ ядерных проблем Белорусского государственного университета	Fedotova Julia Федотова Юлия Александровна
14	РАНИ	Старший научный сотрудник НИИ ядерных проблем Белорусского государственного университета	Kasiuk Julia Касюк Юлия Владимировна
15	РАНИ	Профессор, заведую-щий кафедрой Микро- и наноэлектроники Белорусского государственного университета информатики и радиоэлектроники	Borisenko Victor Борисенко Виктор Евгеньевич
16	РАНИ	Младший научный сотрудник лаборатории нанопроцессов и технологий Института тепло- и массообмена имени А.В. Лыкова НАН Беларуси	Zubar Tatsiana
17	**KU Leuven**	**Professor**	**Joan PEUTEMAN**
18	RTU		

Teachers training seminar in Riga

- The target of the seminar was to validate the topics and methodology of the courses and training programs developed during the project as well as to discuss the first results of new courses testing during the autumn semester.
- Together with the teaching staff of four Belarusian universities, representatives *of Belarusian Nano-industry association, the Institute for Nuclear Problems and the Heat and Mass Transfer Institute* also participated in discussions about the quality and relevance of new courses created and modernized in the project.
- Different topics had been presented:
  - The Fundamentals of Nano-photonics, Technologies for formation of nanocomposite coatings, Application of functional nanomaterials in polymer compositions, etc.
  - One of the presentations was dedicated to Scientific research and training of specialists in the field of nanotechnology and nanomaterials at the Belarusian State University.
  - Etc.

Teachers training seminar in Riga

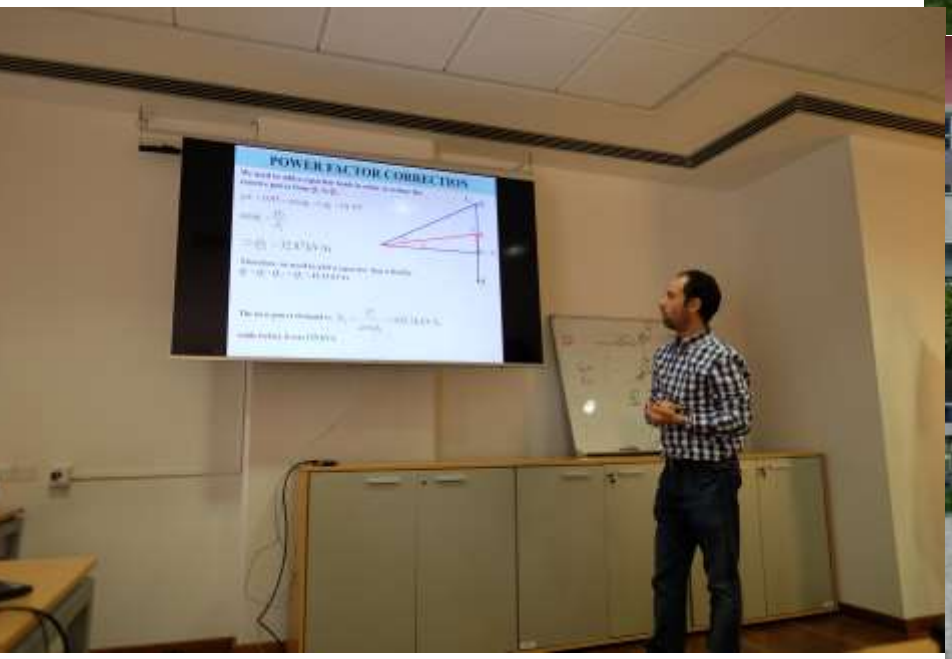
- One-day session of the seminar was devoted to active use of a digital learning environment. The session was held by prof. J. Peuteman from Ku Leuven university.
- The seminar participants attended laboratories of RTU and acquainted the research topics, which are based by the laboratories.
- In the last day of the seminar a round-table discussion was held on the topics related academia – industry collaboration.
- Head of Department of Medical Physics and Engineering Y. Dekhtyar shared RTU experience about collaboration between RTU and the companies that provide job places for the graduates of RTU and personal experience during the transition to Bologna education system.


Pasaule
pieprasa
tehniskos
prātus!

Feedback on students training in the University of Cyprus in February 2018

Monday, 5 February 9:00-12:00	Introduction to the training school Tour of the campus	Elias Kyriakides/Maria Savva
Monday, 5 February 13:00-16:00	Introduction to power systems	Elias Kyriakides
Tuesday, 6 February 9:00-12:00	Visit to outdoors laboratory (grid connected wind turbine and PV system)	Panayiotis Demetriou/Maria Savva
Tuesday, 6 February 13:00-16:00	Renewable energy systems and outline of projects	Lenos Hadjidemetriou
Wednesday,7 February 9:00-12:00	Principles and applications of fluorescence spectroscopy (2 hours)	Vitali Stsiapura (Grodno State University)
Wednesday,7 February 13:00-16:00	Belarus Energy (Part I: Conventional energy sources; Part II: Renewable energy)	Aksana Dzeruzhkova (Gomel State University)
Thursday,8 February 9:00-12:00	Introduction to power systems (continued)	Elias Kyriakides
Thursday,8 February 13:00-16:00	Power system analysis – modelling of power systems Power flow	Elias Kyriakides
Friday,9 February 9:00-12:00	Simulation software for power transmission systems (PowerWorld)	Panayiotis Demetriou
Friday,9 February 13:00-16:00	Simulation software for power transmission systems (PowerWorld – continued)	Panayiotis Demetriou

Monday, 12 February	Introduction to MATLAB	Stelios Vrachimis/ Alexis
9:00-12:00,13:00-16:00		Kyriakou
Monday, 12 February 13:00-16:00	Introduction to Simulink	Stelios Vrachimis/ Alexis Kyriakou
Tuesday, 13 February 9:00-12:00	Use of MATLAB/Simulink for power systems	Lenos Hadjidemetriou/Lazaros Zacharia
Tuesday, 13 February 13:00-16:00	Use of MATLAB/Simulink for power systems	Lenos Hadjidemetriou/Lazaros Zacharia
Wednesday,14 February 10:00-12:00	Use of MATLAB/Simulink for power systems	Lenos Hadjidemetriou/Lazaros Zacharia
Wednesday,14 February 13:00-16:00	Use of MATLAB/Simulink for power systems	Lenos Hadjidemetriou/Lazaros Zacharia
Thursday,15 February 10:00-12:00	Artificial molecular devices	Vitali Stsiapura (Grodno State University)
Thursday,15 February 13:00-16:00	Machines laboratory - experiments	Lenos Hadjidemetriou/Lazaros Zacharia
Friday,16 February 9:00-12:00	Insulator-to-metal transition in insulators and semiconductors implanted with ions of metal	Mikail Lukashevich
Friday,16 February 13:00-16:00	Diamagnetic-to-ferromagnetic transition in insulators and semiconductors implanted with ions of transition metal	Mikail Lukashevich


POWER FACTOR CORRECTION

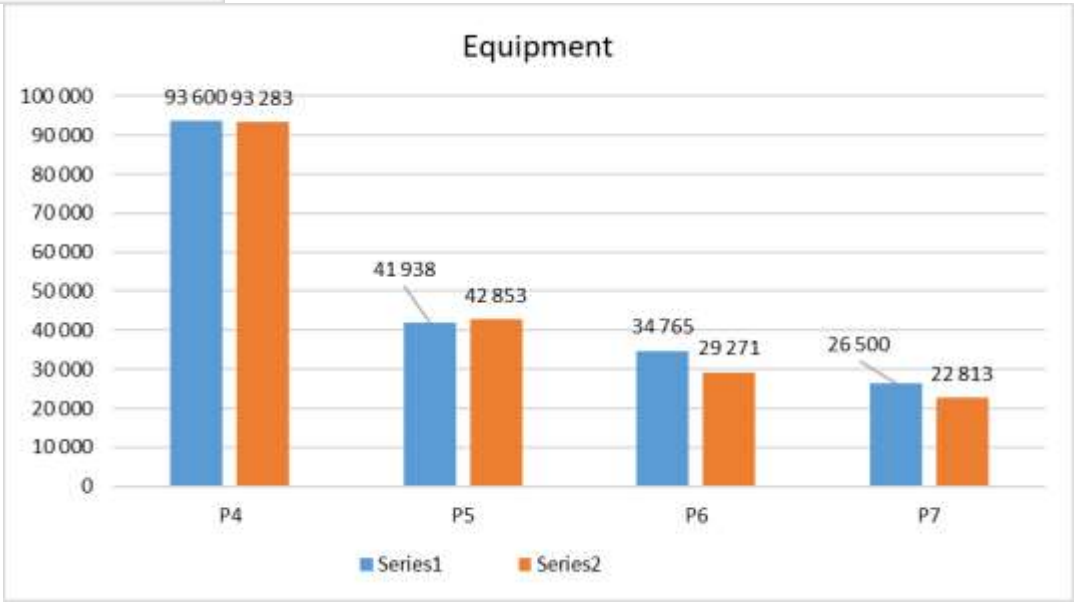
Monitoring and evaluation by external expert

Project financial aspects and arrangements for the Final Financial report

Forecast for October 2018

Costs by project lines

Forecast October 2018



Cost calculation - salaries

- **Managers (staff category 1)** (including legislators, senior officials and managers) carry out top managerial activities related to the administration and coordination of project activities.
- **Researchers, teachers and trainers (RTT) (staff category 2)** typically carry out academic activities related to curriculum/training programme development, development and adaptation of teaching/training materials, preparation and teaching of courses or trainings.
- **Technical staff (staff category 3)** (including technicians and associate professionals) carries out technical tasks such as book-keeping, accountancy, translation activities..
- **Administrative staff (staff category 4)** (including office and customer service clerks) carries out administrative tasks such as secretarial duties.

Supporting documents for Financial report

- A formal employment contract is required.
- The Time-sheets must be signed by the person concerned and countersigned by the person responsible.
- A duly filled in JOINT DECLARATION for each person employed by the project
- The JOINT DECLARATION must be signed by the person concerned, then signed and stamped by the person responsible (e.g. the dean) in the institution where this person is normally employed.
- For staff performing different categories of tasks a separate DECLARATION must be signed for each type of activity.

Instructions for a Auditor

For the employees selected, the Auditor checks that they:

- were hired by the beneficiary in accordance with its national legislation;
- were:
  - employed by the Institution and they were part of its payroll system, or;
  - were natural persons assigned to the project on the basis of a contract against payment;
- were performing tasks directly necessary to the achievement of the objectives of the project;

Which documents should the beneficiary prepare for the auditor?

- *Employment contracts* for the staff in question, as well as *standard employment contracts* in use for personnel who perform a variety of work for the beneficiary
- A duly filled-in Joint Declaration
- If the staff member performs tasks corresponding to different categories of staff, a separate Joint Declaration must be signed for each category.
- Time-sheets
- Any material evidence allowing to verify that the declared workload corresponds to actual activities/outputs

Instructions for a Auditor

In addition, the auditor verifies that:

- for Travel costs, the distance travel bands have been applied correctly;

- for Costs of Stay, the number of unit costs declared corresponds to the actual number of days of the activities (including the travel).

Which documents should the beneficiary prepare for the auditor?

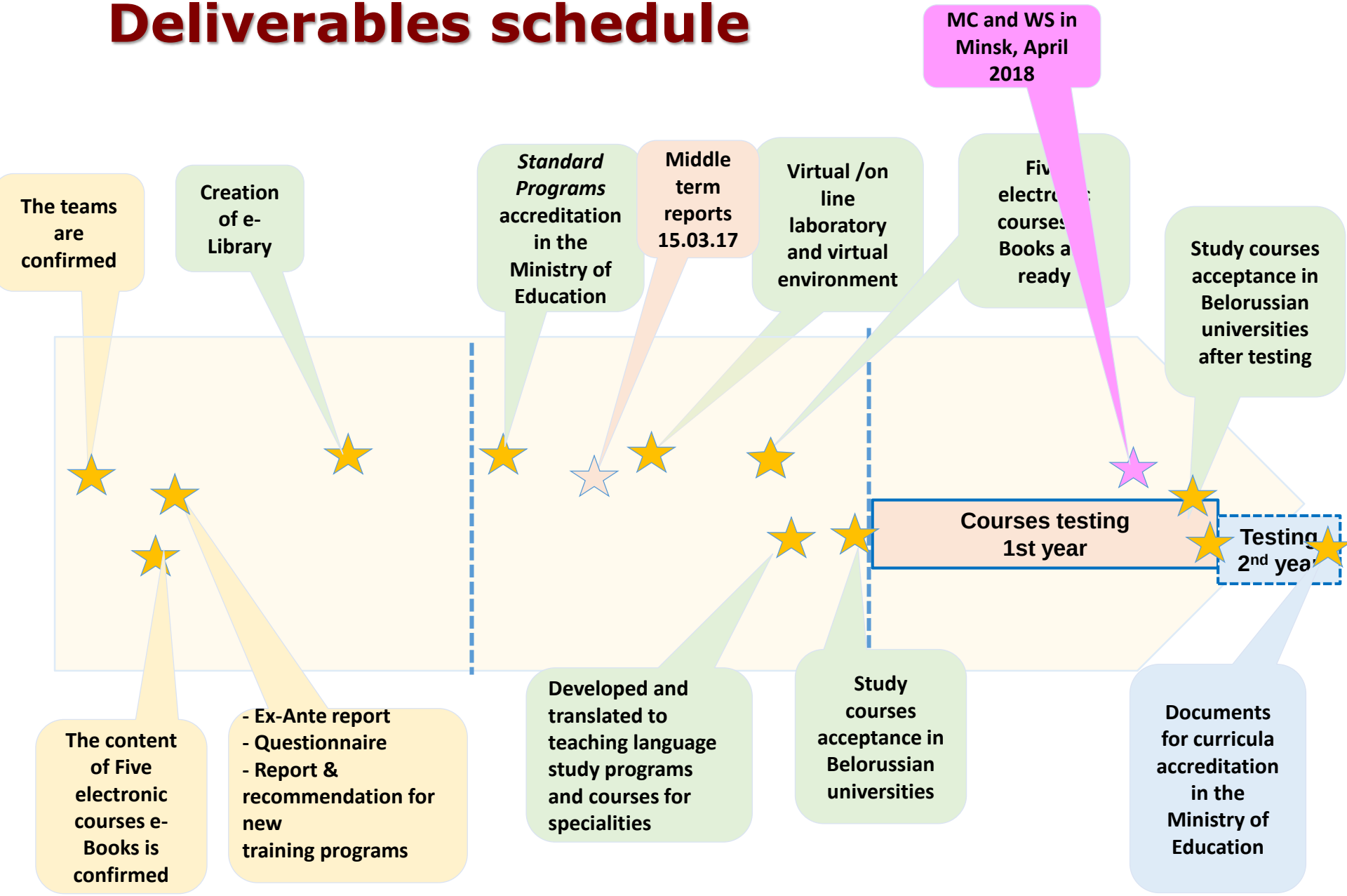
- Any proof that the journeys actually took place and are connected to specific and clearly identifiable project-related activities.

- A duly filled-in Individual Travel Report (Annex III of the Guidelines for the Use of the Grant).

Supporting documentation will have to be attached to each travel report in order to demonstrate the fact that the travel and the activity actually took place (e.g. travel tickets, boarding passes with points of departure and destination, dates and name of the person travelling, invoices, receipts, proof of attendance in meetings and/or events, agendas, tangible outputs/products, minutes of meetings).

Further tasks and the next steps

Deliverables schedule



Meetings and trainings

Place	Responsible	Meeting topics and responsible for the topics	Date
Nicosia	UCY	WS9: WP2: Workshops for curricula development. *First testing results, acceptance.*	June 27-28th 2018
Minsk	BSU	Workshops for curricula development	The end of July 2018?
Minsk	BSTU	Final conference	September 12-13th 2018
Nicosia	UCY	WS9: WP2: Workshops for curricula development. *First testing results, acceptance.*	27-28th 2018

Further tasks and the next steps

- Courses e-books: finalizing!
- Dissemination:
  - Press conferences: 1 in each Belarus university
  - Press releases
  - Web and E-environment – improvements
  - References to the project and its website!
  - Facebook, YouTube and LinkedIn
  - Publication at the conferences
- Sustainability:
  - All materials to be allocated at https://dl.bsu.by/ and at websites of the partners
  - Dissemination and Sustainability plan
- Accreditation
- New curricular testing – spring semester. Testing reports.
- Quality assurance:
  - External report
  - Partners reports
- **Final reports**: Financing and Technical (activities)

Questions